

4. a) $f(x) = 2 \tan \frac{\pi}{4}(x - 1) + 1$ b) $f(x) = -3 \tan \frac{2\pi}{3}(x + 2) - 5$

1. $p = 4$

2. $x = -1$ and $x = 3$

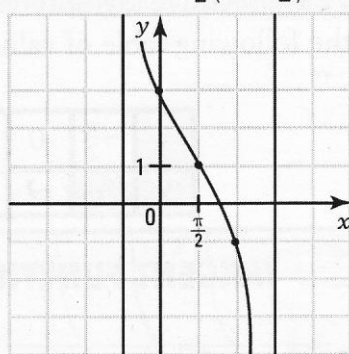
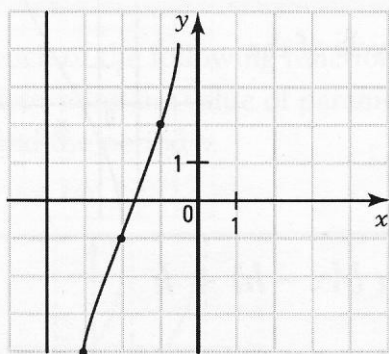
3. $\mathbb{R} \setminus \{3 + 4n\}$

1. $p = \frac{3}{2}$

2. $x = -\frac{11}{4}$ and $x = -\frac{5}{4}$

3. $\mathbb{R} \setminus \left\{ \frac{-5}{4} + \frac{3}{2}n \right\}$

5. a) $f(x) = 3 \tan \frac{\pi}{4}(x + 2) - 1$ b) $f(x) = -2 \tan \frac{1}{2}\left(x - \frac{\pi}{2}\right) + 1$



6. a) zeros: $\frac{5}{2} + 6n$ b) zeros: $-\frac{5}{2} + 3n$

7. a) 2 b) -1

8. $f(x) \geq 0$ over the interval $[0 + 4n, 3 + 4n[$.

9. The function is decreasing over $\mathbb{R} \setminus \{-1 + 6n\}$ since $ab < 0$.